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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/579,365	05/15/2006	Min-won Kim	1203-105	2990

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EXAMINER	
MELLON, DAVID C	
ART UNIT	PAPER NUMBER
1777	
MAIL DATE	DELIVERY MODE
12/07/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/579,365	KIM, MIN-WON	
	Examiner	Art Unit	
	DAVID C. MELLON	1777	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 September 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *7 and 8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *7 and 8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nam et al. (US 2003/0042191) in view of Reid (USP 5,591,332) in view of Fritze (USP 6,649,056) and further in view of Fritze (USP 6,632,355).

Regarding claim 7, Nam et al. discloses a filter apparatus for water purification (abstract) in figures 1-4 comprising:

a head (10) having a guide passage (11) and an inlet port (12) and an outlet port (14), said guide passage suitable for guiding fluid through said inlet port, said outlet port suitable for discharging purified fluid from said head, said guide passage having a longitudinal axis, said guide passage having a wall with an inner diameter that narrows in diameter toward and adjacent one end thereof (see guide passage wall at 42 forms valve seat);

a filter body (1), said filter body having an inlet hole (7) formed in an upper surface thereof, said inlet hole having a longitudinal axis offset from said longitudinal axis of said guide passage (see inlet is offset from 12b), said one end of said guide passage facing said upper surface of said filter body in a position away from said inlet hole (guide passage directly faces frame 5), said upper surface of said filter body and a lower surface of said head defining a channel extending from said one end of said guide passage to said inlet hole, said filter body having at least one through hole formed

therein so as to allow fluid to flow from said filter body to said outlet port of said head (see channel and flow path); and

a fluid flow interrupter (second valve assembly 40) disposed in said guide passage between said inlet port and said upper surface of said filter body, said fluid flow interrupter having a fluid guide rod (44) formed at one end thereof, said fluid flow interrupter having an opening and closing body connected to said fluid guide rod (42/43), said opening and closing body having a diameter that decreases away from said fluid guide rod (see reduction in diameter from projections 46 to tip right above arrow pointing from reference 40), said fluid flow interrupter having an opening and closing projection extending from an end of said opening and closing body opposite said fluid guide rod, said opening and closing projection having an and extending outwardly of said one end of said guide passage (projection portion is part of 43 - lower part), said fluid flow interrupter having an elastic spring positioned within said guide passage so as to bear against said opening and closing body so as to urge said opening and closing projection outwardly of said one end of said guide passage (spring 45), said fluid guide rod extending through one end of said elastic spring (see in figure 4 spring around guide rod), said spring abutting said protrusion (see in figure 4 against protrusion, the protrusion is interpreted as from 46 downwards to the curve portion at just above 42) said fluid flow interrupter having a hollow cylindrical protuberance positioned adjacent another end of said guide passage (see flanges in figure 4 that support rounded end of guide rod and also support spring on the outside), said elastic spring having another end fitted around said hollow cylindrical protuberance (see positioning of spring), said

hollow cylindrical protuberance having an inner diameter greater than an outer diameter of said fluid guide rod (guide rod fits within in part), said opening and closing body being spaced from said one end of said guide passage when said upper surface of said filter body bears against said end of said opening and closing projection so as to allow fluid to flow thereby and outwardly of said one end of said guide passage and into said channel, said elastic spring urging said opening said closing body toward said one end of said guide passage so as to be in sealing relation with said wall of said guide passage when said filter body is uncoupled from said head and so as to block fluid from flowing outwardly of said one end of said guide passage (function is performed - see [0049], [0059]).

Nam does not explicitly disclose the use of a filter body threadably locked to the head or an o-ring around the opening and closing body.

Reid discloses a filter unit having threadably engaged system and a valve member with an o-ring at the end of an opening and closing member in figures 4. See O-ring (37) and threads (see on filter 60 and also C4/L45-50).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the unit of Nam by adding an o-ring to the opening and closing unit as taught by Reid for the purpose of providing an improved seal over just a pressure fit seal. Furthermore, one having ordinary skill in the art would have recognized an appreciable benefit by installing an o-ring to prevent the leakage of water which would result in unnecessary waste.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the filter cartridge and mount of Nam by replacing the snap fit with a threaded fitting system of Reid for the purpose of providing an improved, more secure, fitting mechanism while retaining the ease of replacement of the filter cartridge.

Nam discloses a protrusion and spring/o-ring when modified. However, it is not clear if Nam explicitly discloses the o-ring being situated opposite the spring on a protrusion.

Fritze discloses a filter assembly valve member in figure 6 utilizing a spring with a protrusion and seal member.

It would have been obvious to one having ordinary skill in the art at the time of the invention to have modified the valve member of Nam by utilizing a single protrusion model as taught by Fritze in figure 6 to have the spring biased on one end and opening/closing seal equivalent to an o-ring 102 biased on the opposite side for the purpose of simplifying the valve member design.

Nam as modified is silent as to having a plurality of inlet through holes in the filter cartridge.

Fritze '355 discloses a filter assembly (title/abstract) utilizing a filter cartridge end cap shown in figures 9-10 having a plurality of circumferentially spaced inlet through holes (420).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the filter cartridge of Nam to utilize a plurality of inlet through holes

as taught by Fritze '355 for the purpose of providing for even flow distribution throughout the filter cartridge to maximize useful life of the filtering material.

Regarding claim 8, Nam et al. further discloses a bracket having one end coupled to an outer surface of said head and an opposite end suitable for fastening to a wall (fixing unit 130 attached to circular plate 137 used to attach the device to a wall [0043]).

Response to Arguments

3. Applicant's arguments with respect to claims 7-8 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID C. MELLON whose telephone number is (571)270-7074. The examiner can normally be reached on Monday through Thursday 9:00am-5:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vickie Kim can be reached on (571) 272-0579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tony G Soohoo/
Primary Examiner, Art Unit 1774

/D. C. M./
Examiner, Art Unit 1777